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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,102	08/17/2006	Takeshi Yamamoto	70404.108/ha	1042
54/072 7590 11/04/2009 SHARP KABUSHIKI KAISHA C/O KEATING & BENNETT, LLP 1800 Alexander Bell Drive SUITE 200 Reston, VA 20191				
EXAMINER				
SPAR, ILANA L				
ART UNIT		PAPER NUMBER		
2629				
NOTIFICATION DATE		DELIVERY MODE		
11/04/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

## Application No.

10/598,102

## Applicant(s)

YAMAMOTO ET AL.

## Examiner

ILANA SPAR

## Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 8/17/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. The following Office Action is responsive to the amendments and remarks received on August 6, 2009.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 3, 5, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino (US Patent Publication No. 2003/0007227) in view of Toyoda (Japanese Patent Publication No. 11-120491).

With reference to claim 1, Ogino teaches a display device mounted to a mode of transport comprising:

a first display area that is fixed with respect to the display device (see Figure 5, the DVD image produced by DVD reproducing device 14); and

a second display area that is fixed with respect to the display device, that is separate from the first display area, and that is closer to a position of an operator than is the first display area when the display device is mounted to the mode of transport (see Figure 5, the navigation image produced by the navigation device 13);

a first luminance level output section (20, 30b) arranged to output a first luminance level representing luminance of an image display produced in the first display area (see paragraph 40 – the shutter and microprism adjust the light being transmitted in the direction of the passenger seat);

a second luminance level output section (20, 30a) arranged to output a second luminance level representing luminance of an image display produced in the second display area (see paragraph 40 – the shutter and microprism adjust the light being transmitted in the direction of the driver seat).

Ogino fails to teach that the luminance of the first area is less than the luminance of the second area.

Toyoda teaches a luminance limiting section (115) arranged to limit, according to the first luminance level and the second luminance level, the luminance of the image display produced in the first display area to be less than the luminance of the image display produced in the second display area (see paragraph 30 and paragraph 35).

Ogino teaches reducing viewability of non-essential display data for a driver of a vehicle using a shutter. Toyoda teaches reducing viewability of non-essential display data for a driver of a vehicle by decreasing the luminance level of the non-essential information. It would have been obvious to one of ordinary skill in the art at the time of

invention that either method is useful and practical in focusing the driver's attention away from non-essential information, such as a DVD video, and focusing the driver's attention on the pertinent information to driving, such as a map or traffic conditions. It would have been obvious to one of ordinary skill in the art to use the luminance limiting section of Toyoda in the display of Ogino to maintain driver safety and also to save power through the reduced backlight luminance of the first display area.

With reference to claim 3, Ogino and Toyoda teach all that is required with reference to claim 1, and Ogino further teaches a motion detecting section (12) arranged to sense a motion of the mode of transport (see paragraph 28); wherein

if the mode of transport is determined to be moving according to a result of sensing fed from the motion detecting section, then the luminance limiting section limits the luminance of the image display produced in the first display area to be less than the luminance of the image display produced in the second display area (see paragraph 43, line 8 to paragraph 44, line 5).

With reference to claim 5, Ogino and Toyoda teach all that is required with reference to claim 1, and Ogino further teaches that:

the first luminance level output section is arranged to output the first luminance level according to image data for the image display produced in the first display area (see paragraph 43, lines 4-8 – the DVD data is output to the first display area according, and the first luminance level output section adjusts the luminance such that the passenger is able to view the DVD data, or, if the car is not moving, such that both the passenger and the driver can view the DVD data); and

the second luminance level output section is arranged to output the second luminance level according to image data for the image display produced in the second display area (see paragraph 43, lines 4-8 – the navigation data is output to the second display such that the driver is able to view the map and navigate the vehicle appropriately).

With reference to claim 11, Ogino teaches a method of controlling a display device mounted to a mode of transport comprising:

a first display area that is fixed with respect to the display device (see Figure 5, the DVD image produced by DVD reproducing device 14); and

a second display area that is fixed with respect to the display device, that is separate from the first display area, and that is closer to a position of an operator than is the first display area when the display device is mounted to the mode of transport (see Figure 5, the navigation image produced by the navigation device 13), the method comprising the steps of:

outputting a first luminance level representing luminance of an image display produced in the first display area (see paragraph 40 – the shutter and microprism adjust the light being transmitted in the direction of the passenger seat);

outputting a second luminance level representing luminance of an image display produced in the second display area (see paragraph 40 – the shutter and microprism adjust the light being transmitted in the direction of the driver seat).

Ogino fails to teach that the luminance of the first area is less than the luminance of the second area.

Toyoda teaches limiting, according to the first luminance level and the second luminance level, the luminance of the image display produced in the first display area to be less than the luminance of the image display produced in the second display area (see paragraph 30 and paragraph 35).

Ogino teaches reducing viewability of non-essential display data for a driver of a vehicle using a shutter. Toyoda teaches reducing viewability of non-essential display data for a driver of a vehicle by decreasing the luminance level of the non-essential information. It would have been obvious to one of ordinary skill in the art at the time of invention that either method is useful and practical in focusing the driver's attention away from non-essential information, such as a DVD video, and focusing the driver's attention on the pertinent information to driving, such as a map or traffic conditions. It would have been obvious to one of ordinary skill in the art to use the luminance limiting section of Toyoda in the display of Ogino to maintain driver safety and also to save power through the reduced backlight luminance of the first display area.

With reference to claim 12, Ogino teaches a computer-readable storage medium having a computer program, when run on a computer, for controlling:

- a display device mounted to a mode of transport (see paragraph 26) including:
  - a first display area that is fixed with respect to the display device (see Figure 5, the DVD image produced by DVD reproducing device 14); and
  - a second display area that is fixed with respect to the display device, that is separate from the first display area, and that is closer to a position of an operator than is

the first display area when the display device is mounted to the mode of transport (see Figure 5, the navigation image produced by the navigation device 13);

the program causing a computer to execute:

outputting a first luminance level representing luminance of an image display produced in the first display area (see paragraph 40 – the shutter and microprism adjust the light being transmitted in the direction of the passenger seat);

outputting a second luminance level representing luminance of an image display produced in the second display area (see paragraph 40 – the shutter and microprism adjust the light being transmitted in the direction of the driver seat).

Ogino fails to teach that the luminance of the first area is less than the luminance of the second area.

Toyota teaches limiting, according to the first luminance level and the second luminance level, the luminance of the image display produced in the first display area to be less than the luminance of the image display produced in the second display area (see paragraph 30 and paragraph 35).

Ogino teaches reducing viewability of non-essential display data for a driver of a vehicle using a shutter. Toyota teaches reducing viewability of non-essential display data for a driver of a vehicle by decreasing the luminance level of the non-essential information. It would have been obvious to one of ordinary skill in the art at the time of invention that either method is useful and practical in focusing the driver's attention away from non-essential information, such as a DVD video, and focusing the driver's attention on the pertinent information to driving, such as a map or traffic conditions. It



would have been obvious to one of ordinary skill in the art to use the luminance limiting section of Toyoda in the display of Ogino to maintain driver safety and also to save power through the reduced backlight luminance of the first display area.

5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino in view of Toyoda as applied to claim 1 above, and further in view of Sawayama et al (US Patent Publication No. 2004/0014488).

With reference to claim 2, Ogino and Toyoda teach all that is required with reference to claim 1, but fail to teach separate backlights for each display area.

Sawayama et al. teaches that:

the first and second display areas (5 and 20) are provided on a transmissive liquid crystal display device with separate backlights for each of the display areas (see paragraph 72, lines 14-15, paragraph 76, lines 3-4, and paragraph 93); and

the luminance limiting section (40) regulates output optical intensity of at least one of the separate backlights (see paragraph 93).

It would have been obvious to one of ordinary skill in the art at the time of invention to use separate light sources for the separate display areas such that the luminances of the display areas could be independently controlled based on the user's needs.

With reference to claim 4, Ogino, Toyoda, and Sawayama et al. teach all that is required with reference to claim 2, and Ogino further teaches that the first and second display areas are both provided on a single transmissive liquid crystal display device (see paragraph 30, lines 1-3 and Figure 5).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino in view of Toyoda as applied to claim 1 above, and further in view of Prince et al. (US Patent No. 5,440,322).

Ogino and Toyoda teach all that is required with reference to claim 1, but fail to teach pixel correction.

Prince et al. teaches that the luminance limiting section is arranged to correct pixel values for pixels corresponding to the image display produced in the first display area and/or pixel values for pixels corresponding to the image display produced in the second display area (see column 6, lines 49-55).

It would have been obvious to one of ordinary skill in the art at the time of invention that it is possible to have pixel voltage errors due to crosstalk, and that in order for the pixels to display correct luminance values, crosstalk correction is required, as taught by Prince et al. (see column 2, lines 4-29).

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino in view of Toyoda further in view of Sawayama et al. as applied to claim 2 above, and further in view of Schilling et al. (Japanese Patent Publication No. 2001-215945).

Ogino, Toyoda, and Sawayama et al. teach all that is required with reference to claim 2, but fail to teach ambient brightness detection.

Schilling et al. teaches:

a brightness detecting section arranged to sense brightness inside the mode of transport (see paragraph 15, lines 9-10); and

an optical intensity regulation data correction section arranged to correct optical intensity regulation data according to an output of the brightness detecting section; wherein

the luminance limiting section uses the optical intensity regulation data to regulate the output optical intensity of the separate backlights (see paragraph 15, line 9 to paragraph 16, line 6).

It would have been obvious to one of ordinary skill in the art at the time of invention that ambient brightness affects the viewability of displays, and that ambient brightness is a significant concern in vehicles, where it is not possible to fully block incoming light, such that the display brightness must be altered to account for ambient brightness in order for the vehicle driver to accurately be able to see the display and navigate the vehicle according to map information, traffic conditions, or the like.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino in view of Toyoda as applied to claim 1 above, and further in view of Schilling et al.

Ogino and Toyoda teach all that is required with reference to claim 1, but fail to teach luminance regulation disable means.

Schilling et al. teaches a luminance regulation disabling section arranged to disable the luminance limiting section in response to an instruction from a driver and/or a passenger (see paragraph 15, lines 10-11; it would be obvious that if the luminance values can be controlled by the user, the automatic luminance control means would be disabled by the user to allow the user to obtain control of the luminance).

It would have been obvious to one of ordinary skill in the art at the time of invention that the driver may wish to view the content of the first display area while driving, despite safety concerns. Therefore, to accommodate user preferences, it would be obvious to include a system override function that would allow the driver to prevent the luminance of the first display area from being lowered, thus making the first display area more visible to the driver.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino in view of Toyoda as applied to claim 1 above, and further in view of Kawashima et al. (US Patent No. 6,188,380).

Ogino and Toyoda teach all that is required with reference to claim 1, but fail to teach luminance sensors.

Kawashima et al. teaches a first luminance sensor arranged to sense the luminance of the image display produced in the first display area; and

a second luminance sensor arranged to sense the luminance of the image display produced in the second display area,

the first luminance level output section is arranged to output the first luminance level according to a detection signal from the first luminance sensor; and

the second luminance level output section is arranged to output the second luminance level according to a detection signal from the second luminance sensor (see column 4, lines 8-42).

It would have been obvious to one of ordinary skill in the art at the time of invention to include luminance sensors for each display as a feedback control means to ensure that the display luminances are at the preset intended values.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogino in view of Toyoda as applied to claim 1 above, and further in view of Cole (US Patent No. 4,581,640).

Ogino and Toyoda teach all that is required with reference to claim 1, but fail to teach each an aspect ratio of 7:3 or greater.

Cole teaches a display device wherein the first display area and the second display area, as a whole, have an aspect ratio of 7:3 or greater (see column 3, lines 28-35 and Figure 1).

It would have been obvious to one of ordinary skill in the art at the time of invention that a display can have an aspect resolution of any value which accommodates the data to be displayed, and it is further already known in the art that a display with multiple display areas can have an aspect ratio of 7:3.

#### ***Response to Arguments***

11. Applicant's arguments, see page 7, filed August 6, 2009, with respect to the rejection of claim 12 under 35 USC § 101 have been fully considered and are persuasive. The rejection of claim 12 has been withdrawn.

12. Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **ILANA SPAR** whose telephone number is (571)270-7537. The examiner can normally be reached on **Monday-Thursday 8:00-4:00 EST**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Bipin Shalwala** can be reached on (571)272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bipin Shalwala/  
Supervisory Patent Examiner, Art Unit 2629

ILS